STATUS OF GYPSY MOTH DEFOLIATION AND SUPPRESSION IN NEW ENGLAND AND NEW YORK 1984 to 1986

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Defoliation and Trend

Gypsy moth defoliation more than doubled in southern New England and New York from 1984 to 1986. In 1986, defoliation totaled nearly one million acres (Figure 1, Table 1). In the past two years, gypsy moth populations in Massachusetts have been highest in the central and southeastern part of the State. Next year populations are expected to build in the north central portion of the State and decrease somewhat in the other infested areas. In New York, populations are increasing in most infested areas. In some areas egg mass counts have increased substantially over last year. Populations have been building on the Seneca Indian Lands in western New York. At West Point Military Reservation, populations are declining in some sites and increasing in others. In Rhode Island, populations have been high for the past few years. However, a downward trend is apparent.

In contrast, defoliation in northern New England has been low since 1984. Vermont and New Hampshire have reported no noticeable defoliation in the past three years. In Vermont, larval populations in 1986 were similar to 1985 levels, and the same is expected for next year. New Hampshire expects an increase in populations and possibly some defoliation next year. Maine reported an increase in defoliation in 1986. Most of the defoliation was in or near stands defoliated in 1985, but a few new areas of defoliation occurred. There is a potential for expansion of the current infestation next year.

Table 1.--Moderate to heavy gypsy moth defoliation in New England and New York, 1984 to 1986.

State	1984	1985	1986
	----------Acres----------		
Connecticut	544	89,544	237,237
Maine	1,892	6,698	11,572
Massachusetts	185,520	414,084	343,091
New Hampshire	0	0	0
New York	33,678	129,820	175,365
Rhode Island	164,600	133,920	219,150
Vermont	0	0	0
	386,234	774,066	986,415

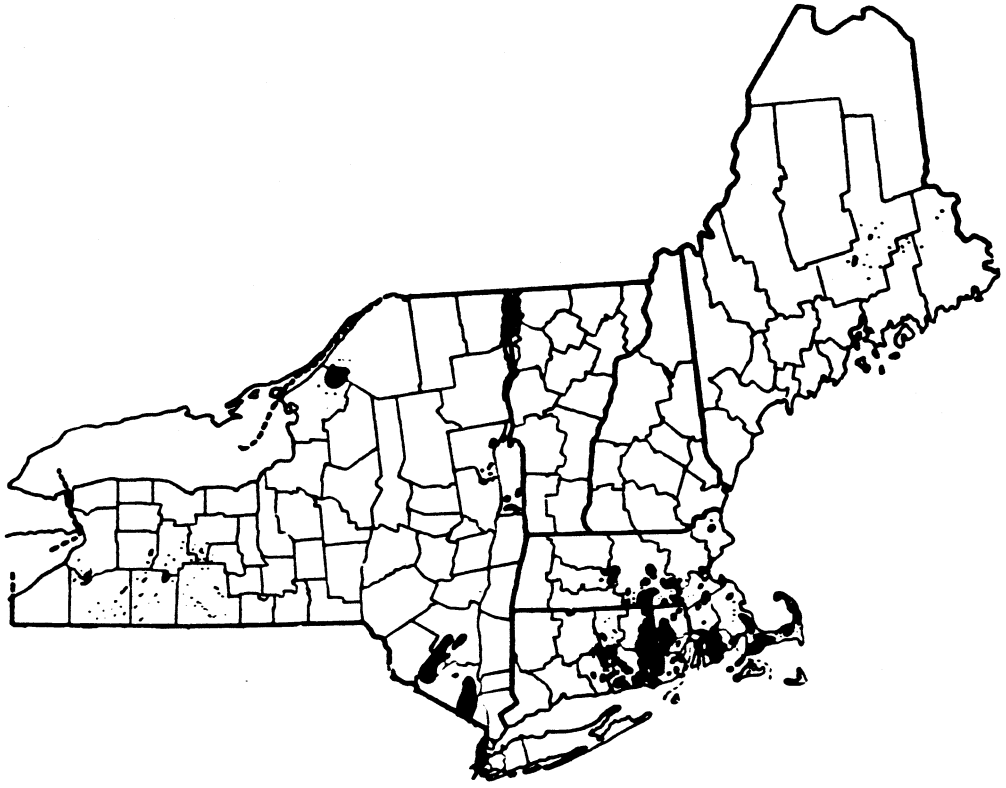

Figure 1. Areas of moderate to heavy defoliation in New England and New York, 1986.

Suppression

In 1985 and 1986, State-Forest Service Cooperative Suppression Projects were conducted in Rhode Island and Massachusetts (Table 2). Suppression projects were also conducted on the West Point Military Reservation and the Seneca Indian Lands in New York.

Table 2. Cooperative gypsy moth suppression projects in New England and New York 1985, 1986, and proposals for 1987.

State/Area	1985	1986	Proposed 1987
	---------- Acres ----------		
Massachusetts	0	3,909	15,000
Rhode Island	21,936	18,107	70,000
West Point	5,965	2,548	3,000
Seneca Indian Lands	0	7,855	8,000

The insecticide used in all instances was B.t., except the 1986 project on the Seneca Indian Lands where carbaryl (Sevin-4-Oil) was used. In 1986 at West Point the B.t. was applied using a helicopter equipped with a Slung Pesticide Dispersal Unit, developed by the Army. It is a self-contained unit which provided good insecticide dispersal.

Massachusetts and Rhode Island have proposed suppression projects again for 1987. Projects are also proposed again for West Point and the Seneca Indian Lands in New York.

Population Monitoring

The States and USDA Forest Service have been involved in various population monitoring projects. In Massachusetts, the State is cooperating with the University of Massachusetts in developing a population trend survey using a modified APHIS pheromone trap. The modified trap has six of the eight holes covered and a lure of reduced strength is used (a racemic lure rather than a disparlure) to eliminate the problem of trap saturation. The modifications have proven successful. In 1986, the same kind of trap was used by Maine and New Hampshire. Overall, moth catches in both states were relatively low.

The Forest Service has been conducting a gypsy moth population monitoring program on Federal lands throughout New England and New York since 1983. In 1986, 19 Federal areas were involved including National Forests, National Park Service sites, and military installations. Overall, the 1986 catches were the same or lower than in 1985, except for one site in Rhode Island and three sites in the White Mountain National Forest in New Hampshire, where catches were higher.

Rhode Island yearly assesses egg mass populations through their permanent grid sample system. In Vermont, the State in cooperation with the University of Vermont, is monitoring populations at several study sites where outbreaks in the past have first been detected.

Summary

It appears that the major areas of recent gypsy moth activity in New York and southern New England will continue to have moderate to high populations. Massachusetts and Rhode Island are again planning suppression projects. Populations are expected to remain low in most of northern New England.